Emergency Flashlight

This application claims priority to Korean Patent Application No. 10-2003-0037638 filed June 11, 2003; and Korean utility Model Application No. 20-2003-0027769 filed August 29, 2003.

BACKGROUND OF THE INVENTION

Technical Field of the Invention

This invention relates to an emergency flashlight, ~~in particular~~and more particularly to ~~the~~an emergency-flashlight having a flashlight body ~~stably~~ supported by a holder and a cap, designed to ~~be openable and closable relative to the holder, preventing~~prevent the flashlight body from theft and loss.

Description of Related Art and Background of the Invention

~~Most emergency~~ Emergency flashlights are often kept in ~~a chest~~chests of drawers located within rooms~~ or~~, such as living rooms, without being held ~~on~~in a holder. ~~The emergency~~Emergency flashlights are also constructed to be ~~manipulatively~~manually turned on during an emergency situation and to be ~~manipulatively~~manually turned off ~~during a normal situation~~when not in use.

~~The emergency~~Emergency flashlights ~~must~~should be ~~held by itself~~kept in ~~a~~ readily visible ~~location in the rooms,~~locations for ~~a~~ prompt use~~, as a fire extinguisher is readily useful~~ in the event of an emergency such as a power failure or disaster. However, ~~the~~ emergency flashlights ~~can not be easily useful in such emergency, because the flashlights are~~ placed in ~~such a~~an invisible location, such as the chest of drawer~~. Although user knows a location on which the flashlights are placed, it is impossible for user to find readily out~~s, are not readily useful in such emergencies. Even though a user may know the location of an emergency flashlight, it may be difficult for the user to readily find the flashlight in the event of an emergency. In addition, even if the ~~flashlights in~~ user finds the ~~event of such emergency. In addition, although user finds easily out the flashlights~~flashlight, it ~~is~~may be impossible for the user to ~~readily~~ turn on the flashlights.

Brief Summary of the Invention

An object of this invention is to provide an emergency flashlight having a flashlight

body which is attached to a ~~wall~~ holder affixed ~~holder and turned~~to a wall. The flashlight can turn on when it is ~~taken~~ out of the holder, ~~causing~~ enabling a user to readily find ~~out~~ the flashlight ~~body, and a~~. A cap designed to be openable and closable relative to the holder, ~~preventing~~protects the flashlight body from theft and loss.

A further object of this invention is to provide an emergency flashlight ~~of~~ which ~~a flashlight body~~ has a flashlight body with a luminous layer coated or adhered on a center portion thereof~~, causing~~. The luminous layer enables the user to ~~find~~ easily ~~out a~~find the flashlight ~~body placed location~~ in the event of ~~such~~ an emergency situation such as a power failure or disaster.

In order to achieve the above object, the emergency flashlight according to the present invention ~~comprises~~has a flashlight body, and a holder supporting it~~: in which the~~. The flashlight body includes a receiving section storing small batteries therein, ~~a~~an electric lighting section equipped ~~at~~on an upper side of the receiving section, and a lower covering section equipped ~~at~~on a lower side of the receiving section~~; the~~. The holder includes a holder body section fixed to a structure such as a wall, ~~etc.,~~and a support section extending from the holder body section ~~and supporting~~. The holder supports the flashlight body~~,~~ with a protecting section that extends horizontally ~~extending~~ from the holder body section and ~~covering~~covers the electric lighting section of the flashlight body~~, and a~~. A cap is pivotally supported by opposite ends of the support section through a hinge shaft~~; and on~~. A transverse through slot is formed in the receiving section ~~included~~ in the flashlight body~~, a transversely lengthy through slot is formed, and~~. A partition plate is placed on the support section of the holder~~, a partition plate is placed and extended~~ in a location corresponding to the through slot, ~~so that the partition plate is inserted~~and extends into the receiving section via the through slot of the receiving section ~~and interposed between the batteries, interrupting electrical contact between the batteries~~ when the flashlight body is ~~fitted~~ in the holder. The partition plate is configured to interrupt electrical contact between the batteries by being interposed between the batteries.

Brief Description of the Drawings

Figure 1 is an assembled perspective view of an emergency flashlight according to a first embodiment of the present invention;

Figure 2 is an exploded perspective view of the emergency flashlight of Fig. 1;

Figure 3 is a front view of a flashlight body taken out of a holder of the emergency flashlight of Fig. 1;

Figure 4 is a rear view of the holder of the emergency flashlight of Fig. 1 when the flashlight body is taken out of the holder;

Figure 5 is a portion cut-away elevation view of the assembled emergency flashlight of Fig. 1;

Figure 6 is an assembled perspective view of an emergency flashlight according to a second embodiment of the present invention;

Figure 7 is an exploded perspective view of the emergency flashlight of Fig. 6;

Figure 8 is a rear view of a flashlight body taken out of a holder of the emergency flashlight of Fig. 6;

Figure 9 is a front view of the holder of the emergency flashlight of Fig. 6 when the flashlight body is taken out of the holder; and

Figure 10 is a portion cut-away elevation view of the assembled emergency flashlight of Fig. 6.

Detailed Description of ~~Preferred~~ Embodiments

~~A preferred~~ An embodiment of an emergency flashlight according to the present invention will be hereinafter described in detail with reference to the attached drawings.

Referring to Figs 1 to 5, there is shown an emergency flashlight according to a first ~~preferred~~ embodiment of the present invention.

An emergency flashlight according to the first ~~preferred~~ embodiment comprises a flashlight body 110, and a holder 120 holding it~~, in which the~~. The holder is provided with a cap 124 which is designed to be openable and closable relative to ~~it~~the holder.

The flashlight body 110 includes a receiving section 111 for storing a plurality of small batteries 9~~, a~~. An electric lighting section 112 can be equipped at an upper side of the receiving section 111~~, and a~~. A lower covering section 113 can be equipped at a lower side of the receiving section 111.

The holder 120 includes a holder body section 121 fixed to a structure such as a wall~~, etc., a~~. A support section 122 ~~extending~~can extend from the holder body section 121 and ~~supporting~~ can support the flashlight body 110~~, a~~. A protecting section 123 can extend horizontally ~~extending~~ from the holder body section 121 and ~~covering~~can cover the electric lighting section 112 of the flashlight body 110~~, and the~~. The cap 124 can be pivotally supported by opposite ends of the support section 122 through a hinge shaft 124a.

In the first embodiment, four small batteries are received in the receiving section 111. The electric lighting section 112 is screwed-fitted with one end of the receiving section

111, and the lower covering section 113 is screwed-fitted with ~~one~~ another end of the receiving section 111.~~-~~ The small batteries 9 received in the receiving section 111 may be taken out of the receiving section~~, after~~ when the lower covering section 113 is disengaged from the receiving section.

~~In~~A hook member 114 can be formed in a ~~read~~rear side of the receiving section 111 to facilitate portability of the flashlight body 110 when removed from the holder 120. ~~, a hook member 114 giving good portability for user after the flashlight body 110 is taken out of the holder 120 is formed.~~

~~For the good portability~~. Advantageously, the hook member ~~114 may be of elastic material, and~~can be ~~hanged on~~attached to various objects such as a belt, or a handle ring of hand~~-beg, or etc.~~bag, thereby making the flashlight more portable after the flashlight body 110 is taken out of the holder 120. The hook member 114 may be of elastic material.

The electric lighting section 112 is powered and turned on through the batteries 9 received in the receiving section 111.

As shown in Fig. 2, a ring member 115 can be formed in a lower end of the lower covering section 113~~, a~~. The ring member ~~115~~ can be pivotally supported by a hinge shaft 115a mounted to a lower end of the receiving section 111, ~~is formed~~ so that the flashlight body 110 ~~is hanged~~can be hung on a peg, a clothes hanger, or ~~etc., after~~ the like, when the flashlight body 110 is taken out of the holder 120.

As shown in Fig. 3, a glass cutting edge 112a is attached to a left side of the electric lighting section 112~~, and a~~. A hammer piece 112b ~~of~~ having a gimlet shape ~~made of alloy steel or stainless steel material~~ is attached to a right side of the electric lighting section 112. The hammer piece can be made of alloy steel or stainless-steel material. Advantageously, the glass cutting edge 112a and ~~a~~ hammer piece 112b ~~cause~~ can allow the user to ~~readily perform a cutting, striking~~ cut, strike and break glass and ~~breaking relative to a glass~~ other debris during emergency situation.

The holder body section 121 may be fixed to ~~such~~ a structure such as a wall~~, etc.,~~ by means of a peg, ~~a~~ bonding tape, or ~~etc~~other fastener as known in the art.

As shown in Fig. 4, the support section 122 extends downward by the same length as ~~a~~ the longitudinal length of the flashlight body 110, and has a shape corresponding to the flashlight body 110. In the first embodiment, the flashlight body 110 has a cylindrical shape and the support section 122 has ~~such~~ a similar shape so that it can cover the flashlight body 110.

~~It is preferable that the cap 124 is made of transparent acryl material in order for the~~

~~flashlight body 110 held within the holder to be readily found out. Also, the~~ The cap 124 may be ~~open and close to~~ opened and closed on the holder by pivoting around a hinge shaft 124a. ~~For using the flashlight body 110, the~~ The cap 124 must be open with respect to the holder ~~and then~~before the flashlight body ~~110~~110 can be separated from the support section 122 by a user.

~~It is preferable that the~~ The cap 124 ~~has such~~can have a shape and size that ~~the cap~~ generally covers and protects the flashlight body 110~~ and also a~~. A lower end of the cap ~~abuts~~can abut with a lower end of the support section 122. The cap 124 can be made of transparent acryl material or other similar materials, as known in the art, in order for the flashlight body 110 to be easily seen when in the holder.

As shown in Fig. 2 and Fig. 5, a transversely lengthy through slot 111a is formed on an approximate center portion of the outer periphery surface of the receiving section 111 included in the flashlight body 110~~, a transversely lengthy through slot 111a is formed, and~~. A partition plate 122a is placed on the support section 122 of the holder 120~~, a partition plate 122a is placed~~ in a location corresponding to the through slot 111a~~ and~~. The partition plate extends toward the through slot.

As shown in Fig. 5, the partition plate 122a is interposed between the batteries 9 via the through slot 111a of the receiving section 111, thereby interrupting electrical contact between the batteries. ~~Therefore, it is possible that~~ Thus, the flashlight body 110 is turned on when it is separated from the holder 120 and the partition plate 122a is ~~escaped~~ removed from between the batteries 9~~, and~~. Similarly, the flashlight body is turned off when ~~it is fitted~~placed in the holder 120 ~~and~~because the partition plate 122a is interposed between the batteries 9~~ without a~~. Advantageously, no separate switch~~.~~

~~Also,~~ is needed to turn the flashlight body on or off. Additionally, since the batteries are not ~~contacted to~~ in contact with each other ~~during~~when the flashlight body 110 ~~being held~~ is placed in the holder 120, ~~preventing~~ the batteries ~~from discharge and~~are prevented from discharging, thus enhancing the life of the batteries.

In the emergency flashlight of the first embodiment, the support section 122 of the holder includes a pair of projections 122b on each of the left and right sides~~, and the~~. The receiving section 111 of the flashlight body includes a pair of concave portions 111b ~~having such a~~ corresponding in shape and size ~~that they are fitted with~~to the ~~a~~ pair of projections 122b. The concave portions are located on ~~a~~ outer periphery surface~~, respectively, in order to surely fit~~ s that correspond in location to the pair of projections so that the flashlight body 110 and the holder 120 can be securely fit to each other.~~-~~ Therefore, the flashlight body 110

and the holder 120 may be ~~dismountably fitted~~removably coupled to each other by elastic force between the pair of projections 122b and the pair of concave portions 111b.

~~Therefore, in~~ Thus, when the emergency flashlight according to the first embodiment~~, it is possible that~~ is placed in the holder 120, the partition plate 122a is inserted into the through ~~slit~~ slot 111a of the flashlight body ~~as well as~~, and the projections 122b of the support section are inserted into the concave potions 111b, ~~respectively, in order to~~so that the flashlight body 110 and the holder 120 may be ~~dismountably fitted~~removably coupled to each other.

Referring to Figs 6 to 10, there is shown an emergency flashlight according to a second ~~preferred~~ embodiment of the present invention.

~~In~~ The description ~~about~~of the emergency flashlight ~~according to a~~ of the second ~~preferred embodiment, descriptions about~~ embodiment will omit description of members ~~as configured as is described with respect to the emergency flashlight according the~~ similar to members of the first embodiment ~~will be omitted hereinafter~~ and the ~~members similar to~~ members of the ~~first~~second embodiment are indicated as the same reference numbers or the like numbers of the first embodiment hereinafter.

~~In such a manner that~~Thus, similar to the emergency flashlight described above the emergency flashlight ~~according to the second embodiment is configured as described in the above, an emergency flashlight according to~~of the second embodiment comprises a flashlight body 210, and a holder 220 holding it 210~~, in which the~~. The holder is provided with a cap 224 designed to be open~~able~~ and ~~closable~~close relative to ~~it~~the holder.

The flashlight body 210 includes a receiving section 211 for storing a plurality of small batteries 9~~, a~~. An electric lighting section 212 can be equipped at an upper side of the receiving section 211~~, and a~~. A lower covering section 213 can be equipped at a lower side of the receiving section 211.

The holder 220 includes a holder body section 221 fixed to such a structure such as a wall~~, etc., a~~. A support section 222 ~~extending~~ extends from the holder body section 221 and ~~supporting~~supports the flashlight body 210~~, a~~. A protecting section 223 extends horizontally ~~extending~~ from the holder body section 221 and ~~covering~~ covers the electric lighting section 212 of the flashlight body 210~~, and a~~. A cap 224 can be pivotally supported by opposite ends of the support section 222 through a hinge shaft 224a.

As shown in Figs. 6 and 7, a luminous layer 215 is adhered on a front center portion of the receiving section 211, directed toward a front side when the flashlight body 210 is held in the holder 220~~, i.e.,~~. That is, the luminous layer is adhered to a center portion of the

receiving section 211 that is visible from the outside.~~-~~ The luminous layer 215 may be attached to the receiving section by a coating or adhering process~~, and~~. The luminous layer can be made of a known material that can receive and store a light ~~at normal times~~when exposed to light, and emit the light by itself in the dark ~~for hours. In the emergency flashlight according to the second embodiment, the~~ later. The material of the luminous layer ~~is~~ can be of a light storing material that is able to emit a light for about 20 minutes and can be visible from ~~the~~ a 10 ~~miter distances~~meter distance, but the present invention is not limited to the above.

As shown in Fig. 8, ~~in~~ the second embodiment~~, a~~ can have a glass cutting edge 212a ~~is~~ attached to a one side of a lower end of the lower covering section 213~~, and a~~. A hammer piece 212b, made of alloy steel or stainless-steel material, is attached to ~~a~~another side of the lower end of the lower covering section 213. The glass cutting edge 212a and a hammer piece 212b are ~~readily~~ useful in cutting, striking and breaking ~~a~~ glass or other debris during an emergency situation.

The flashlight body 210 stores batteries and the lower covering section 213 is heavier than the electric lighting section 212~~, enabling~~. Thus the weight of the batteries and lower covering section enables the hammer piece to ~~give~~deliver a stronger striking force to the glass when the glass is hit by the hammer piece ~~with~~. Advantageously, such an arrangement prevents the ~~same striking force. Such arrangement enable a easily breaking member such as a~~ bulb ~~included~~ in the electric lighting section ~~212 to be prevented~~, and other easily breakable members of the flashlight from ~~damage.~~being damaged when the hammer piece is used.

~~In~~A hook member 214 can be formed in a ~~read~~rear side of the receiving section 211 to facilitate portability of the flashlight body 210 when removed from the holder 220. ~~211, a hook member 214 giving good portability for user after the flashlight body 210 is taken out of the holder 220, is formed.~~

~~In the second embodiment, an~~An inner space of the holder body section 221 ~~to be~~ is fixed to ~~such~~ a structure such as a wall~~, etc.,~~ by means of a peg, ~~a~~ bonding tape or ~~etc., receives the same~~other fastening material as known in the art. The inner space can receive spare batteries 9a that are the same as the batteries 9 ~~charged~~ within the flashlight body 210. ~~Thereafter, although the batteries charged~~ Thus, advantageously, when the batteries within the flashlight body are run down, ~~it is possible to use continuously the flashlight body by~~ the spare batteries ~~instead of the~~ can be changed with the run down batteries ~~being charged into~~making it possible to continuously use the flashlight ~~body~~.

The cap 224 generally covers and protects the flashlight body 210. ~~For preventing the~~

~~flashing body from theft and loss, it is preferable that a~~ The lower end of the cap ~~224 and a~~ can be locked to a lower end of the support section 222 ~~are locked~~ by a locking means such as a small size lock ~~or~~, soldering process, ~~in order for them~~ or other locking means that is not ~~to be unlock easily. For such a construction, it is preferable that projections 222c, 224b having a perforate hole are~~ easily unlocked, as known in the art. The locking means prevents the flashlight body from theft and loss. Projections 222b and 224c can be formed in a lower end of the cap 224 and a lower end of the support section 222, respectively~~, in order for~~. The projections can have perforate holes formed therein so that the locking means ~~to~~can be mounted thereto. The locking means is not described in detail ~~described~~ hereinafter~~,~~ because any ~~known various lockers~~locking means known in the art may be substituted for the lock~~ing means~~.

~~In case that the cap 224 is~~ The cap 224 can have a plurality of grooves formed on its surface. The grooves can weaken the cap so that the cap can be broken easily with very little force. Thus, when the cap is closed and locked to the support section 222, the cap can be broken by a little force, so that the flashlight body 210 can be easily removed from the holder. ~~through the locking means or soldering process, it is preferable that the cap is such constructed that a preliminary process, for example, a process that a plurality of grooves are in advance formed on its surface, in order that although the cap 224 is hit by a little force, the cap is broken easily and the flashlight body is taken out of the holder easily.~~ The plurality of grooves, although not shown in the Figs., can be formed on the surface of the cap, ~~although~~and can have the ~~grooves are not shown in the above Figs., in such a manner that the grooves have a~~ shape of a dotted line or a solid line ~~and are~~. The plurality of grooves can be arranged in a single row or two rows through ~~all the area or~~the entire surface of the cap, or only a portion ~~area~~ of the surface of the cap. Other arrangements of the grooves, can be used to facilitate breaking of the cap to gain access to the flashlight body.

~~For preventing the flashlight body from theft, it is preferable that~~As explained above, the lower end of the cap 224 and the lower end of the support section 222 ~~to~~can be abutted and locked to each other ~~is made of a conductible material and a circuit is formed on their surface, in order to sound an alarm when they are separated from each other~~. Additionally, the lower end of the cap and lower end of the support section can be made of a conductive material so that a circuit can be formed by when the cap and support section are in contact with each other. Thus, when the cap and support section are separated from each other, the circuit is disrupted and an alarm will sound. Advantageously, this alarm will alert anyone nearby that the flashlight body has been removed from the holder, thereby preventing theft or

inadvertent loss.

As ~~is~~ in the first embodiment, ~~in~~ the second embodiment, ~~on~~ can have a transverse through slot 211a formed at an approximate center portion of the receiving section 211 included in the flashlight body 210~~, a transversely lengthy through slot 211a is formed,~~. A partition plate 222a can be placed on the support section 222 of the holder~~, a partition plate 222a is placed~~ in a location corresponding to the through slot 211a ~~and extends toward the~~. The partition plate can extend into the through slot (refer to Fig.7 and Fig. 10~~).~~

~~Also,~~) when the flashlight body 210 is placed in the ~~emergency flashlight of the second embodiment, the support section~~ holder 222.

The support section 222 of the holder ~~includes~~can include a pair of projections 222b on each of left and right sides~~, and the~~. The receiving section 211 of the flashlight body ~~includes~~can include a pair of concave portions 211b having ~~such~~ a shape and size that ~~they are fitted~~fits with the ~~a~~ pair of projections 222b on a outer periphery surface, respectively, ~~in order to surely~~so that the flashlight body 210 and the holder 220 securely fit ~~the flashlight body 210 and the holder 220~~ to each other. ~~Therefore~~Thus, the flashlight body 210 and the holder 220 may be ~~dismountably fitted~~removably coupled to each other by elastic force between the pair of projection 222b and the pair of concave portions 211b.

Also, ~~it is preferable that~~ the flashlight body 210 ~~includes~~can include means for turning on the flashlight ~~it~~ when it is separated from the holder 220 and ~~includes~~can include a speaker (not shown) for sounding an alarm by a separate circuit. ~~It is possible~~ The alarm can be configured to sound ~~an alarm for a set~~for a predetermined time or to ~~stop the sound of alarm~~ be turned off by a separate switch at user's option.

The emergency flashlights according to the foregoing ~~preferred~~ embodiments, enable the flashlight body to be placed ~~on~~ in a desired area such as a visible wall~~, etc. through~~ by means of the holder~~, the~~. The user ~~to~~ can easily find ~~easily out~~ the flashlight body~~,~~ and the flashlight body ~~to~~can be turned on as soon as it is taken out of the holder without any ~~help~~activation of a separate switch~~. Thereafter, it is possible for user to find easily out the flashlight body and for flashlight body to be turned on when it is taken out of the holder, causing~~, thus allowing the user to rapidly meet the emergency situation. Additionally, the emergency flashlight of the present invention sounds an alarm when the flashlight body is taken out of the holder, thereby preventing theft and enabling the user to easily find the flashlight body.

~~Also, the emergency flashlight according to the embodiment enables the sound of alarm to be generated when the flashlight body is taken out of the holder, causing the~~

~~flashlight body to be prevented from thief, enabling the user to find easily out the flashlight body.~~